

# Cumulative Review

## Chapters 1–4

For Exercises 1–12, choose the correct letter.

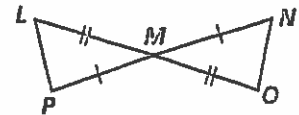
1. Find the value of  $x$ .

- A. 110      B. 70      C. 45      D. 35



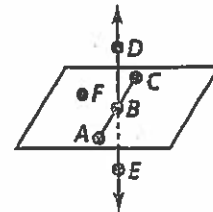
2. Why is  $\triangle LMP \cong \triangle OMN$ ?

- F. ASA      G. SAS      H. AAS      J. SSS



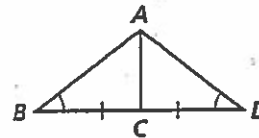
3. What is the intersection of  $\overleftrightarrow{DE}$  and plane  $FAC$ ?

- A.  $\overline{AC}$       B.  $\overleftrightarrow{DB}$       C. plane  $FAC$       D. point  $B$



4. What can you conclude from the diagram?

- F.  $\triangle ABC \cong \triangle ADB$       G.  $\overline{AC} \cong \overline{CD}$   
 H.  $\triangle ABD$  is isosceles.      J.  $BD = 24$



5. What is the area of a rectangle with vertices  $(4, 6)$ ,  $(0, 3)$ ,  $(3, -1)$ , and  $(7, 2)$ ?

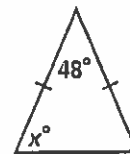
- A. 10      B. 15      C. 20      D. 25

6. Pentagon  $LMNOP \cong TQRSV$ . Which segment is congruent to  $\overline{TV}$ ?

- F.  $\overline{QR}$       G.  $\overline{LP}$       H.  $\overline{OP}$       J.  $\overline{LM}$

7. What is the measure of  $x$ ?

- A. 66      B. 132      C. 48      D. 96

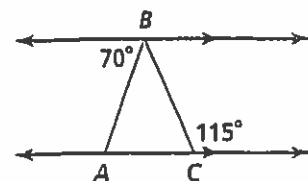


8. Which is true about all right triangles?

- F. Two sides are congruent.      G. They have two acute angles.  
 H. They have one obtuse angle.      J. They have a second right triangle.

9. What is  $m\angle ABC$ ?

- A. 5      B. 65      C. 45      D. 70

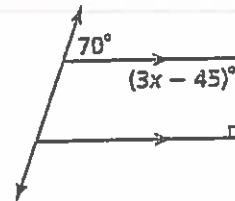


# Cumulative Review (continued)

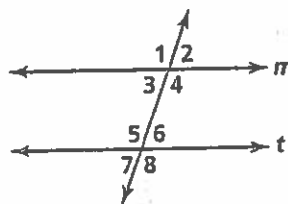
## Chapters 1-4

10. If the midpoint of  $\overline{AB}$  is  $(4, 3)$  and point  $A$  has coordinates  $(-2, 6)$ , what are the coordinates of point  $B$ ?
- F.  $(1, 4.5)$       G.  $(10, 0)$       H.  $(3, 1.5)$       J.  $(2, 9)$

11. Find the value of  $x$ .
- A. 45      B. 35      C. 30      D. 25



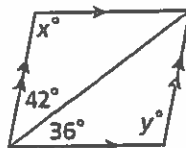
12. Which condition will prove that  $m \parallel t$ ?
- F.  $\angle 1 \cong \angle 3$       G.  $\angle 7 \cong \angle 6$   
 H.  $m\angle 4 + m\angle 8 = 180$       J.  $\angle 2 \cong \angle 6$



13. Construct the perpendicular bisector of  $\overline{CD}$ .



14. Find the measure of  $x$  and  $y$ .



15. The reasons in this proof are listed in the wrong order. Rewrite them in the correct order.

Given:  $\overline{AE} \cong \overline{CD}$ ;  $\angle AED \cong \angle CDE$

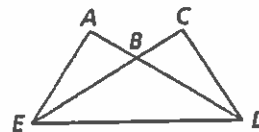
Prove:  $\angle CED \cong \angle ADE$

**Statements**

1.  $\overline{AE} \cong \overline{CD}$
2.  $\angle AED \cong \angle CDE$
3.  $\overline{ED} \cong \overline{DE}$
4.  $\triangle AED \cong \triangle CDE$
5.  $\angle CED \cong \angle ADE$

**Reasons**

- a. Reflexive Property
- b. SAS Theorem
- c. Given
- d. CPCTC Theorem
- e. Given



16. Rewrite the proof in Exercise 15 as a flow proof.

17. **Open-Ended** Write a biconditional. Then write the two conditionals that make up the biconditional.

18. What conditions *do not* prove two triangles are congruent?

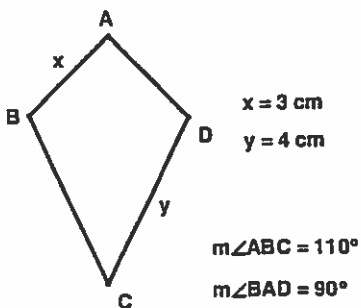
**Kite**

ABCD is a Kite  
Find each measurement

Perimeter \_\_\_\_\_

$\angle ADC$  \_\_\_\_\_

$\angle BCD$  \_\_\_\_\_

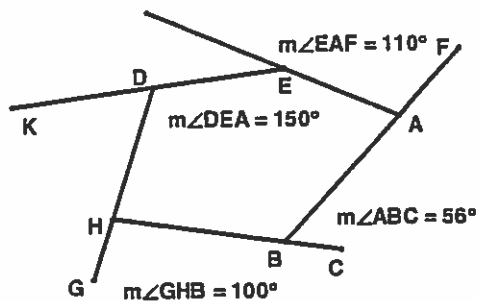


**Exterior Angles**

Find each angle

$\angle EDH$  \_\_\_\_\_

$\angle HDK$  \_\_\_\_\_



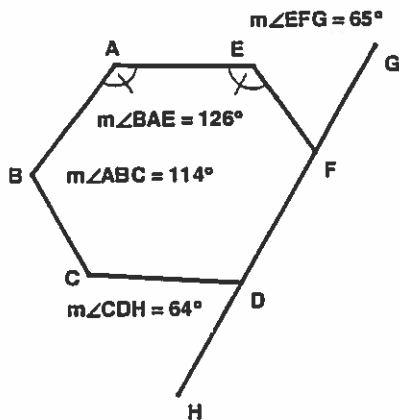
**Interior Angles**

Find each angle

$\angle DFE$  \_\_\_\_\_

$\angle CDF$  \_\_\_\_\_

$\angle BCD$  \_\_\_\_\_



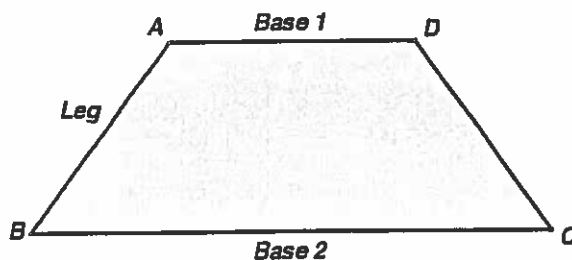
**Isosceles Trapezoid**

$\overline{DC} =$  \_\_\_\_\_

$m\angle DCB$  \_\_\_\_\_

$m\angle BAD$  \_\_\_\_\_

Perimeter \_\_\_\_\_



$m\angle BCD = 53.1^\circ$

Leg = 6.3 cm

Base 1 = 6.7 cm

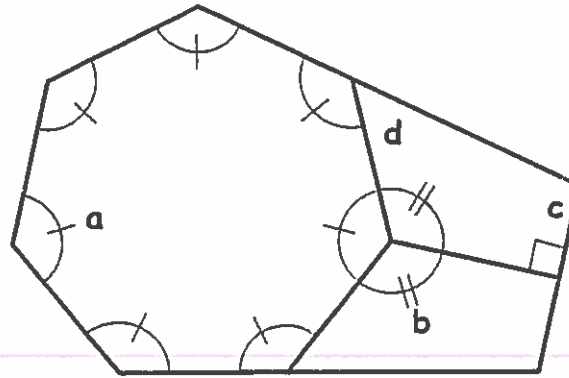
Base 2 = 14.2 cm

a = \_\_\_\_\_

b = \_\_\_\_\_

c = \_\_\_\_\_

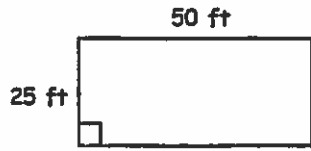
d = \_\_\_\_\_



### Matching

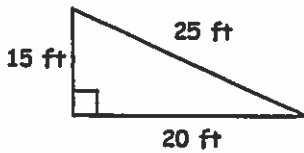
- |   |                         |
|---|-------------------------|
| _____ Two angles added together = 180 degrees.                          | A. Isosceles Triangle   |
| _____ Polygon with 8 sides.   | B. Median               |
| _____ Segment connecting vertex to midpoint in a triangle.              | C. Vertical Angles      |
| _____ Triangle with no equal sides.                                     | D. Rhombus              |
| _____ Quadrilateral with 4 equal sides.                                 | E. Rectangle            |
| _____ Triangle with three angles less than 90 degrees.                  | F. Pentagon             |
| _____ Two angles added together = 90 degrees.                           | G. Acute Triangle       |
| _____ Quadrilateral with 4 equal angles.                                | H. Scalene Triangle     |
| _____ Polygon with 5 sides.   | I. Obtuse Triangle      |
| _____ Triangle with a least two equal sides.                            | J. Octagon              |
| _____ Triangle with one angle greater than 90 degrees.                  | K. Regular Polygon      |
| _____ Two angles opposite of each other and congruent.                  | L. Supplementary Angles |
| _____ Segment from vertex perpendicular to opposite side of a triangle. | M. Complimentary Angles |
| _____ Polygon with equal sides and equal angles.                        | N. Altitude             |

Area



perimeter \_\_\_\_\_

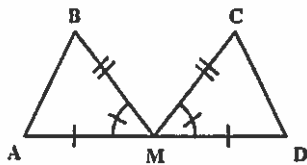
area \_\_\_\_\_



perimeter \_\_\_\_\_

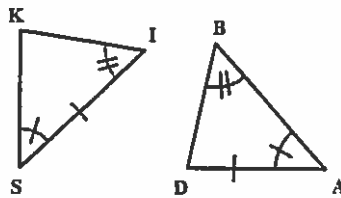
area \_\_\_\_\_

Triangle Congruency



$\triangle MAB \cong \triangle$  \_\_\_\_\_

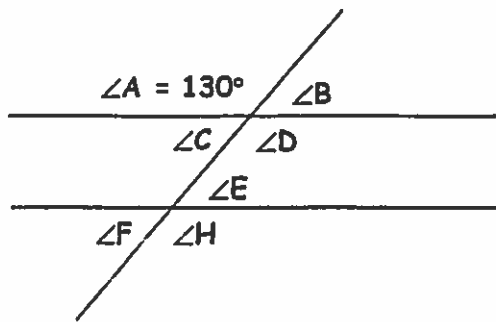
Why \_\_\_\_\_



$\triangle SKI \cong \triangle$  \_\_\_\_\_

Why \_\_\_\_\_

Find each angle measurement



$\angle B$  \_\_\_\_\_

$\angle C$  \_\_\_\_\_

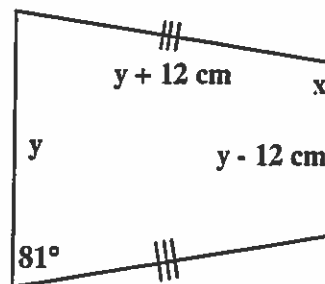
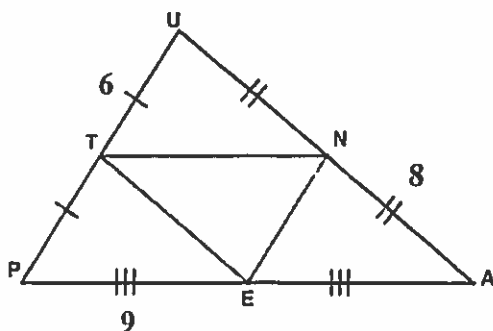
$\angle D$  \_\_\_\_\_

$\angle E$  \_\_\_\_\_

$\angle F$  \_\_\_\_\_

$\angle H$  \_\_\_\_\_

What is the Perimeter of  $\triangle TEN$ ? \_\_\_\_\_



$x =$  \_\_\_\_\_

$y =$  \_\_\_\_\_

Perimeter = 164 cm

